AMENDMENTS TO THE SPECIFICATION

Please replace Paragraph [0014] with the following paragraph rewritten in amendment format:

[0014] These and other objects are achieved according to the invention by a luminescent glass comprising a base glass doped with 0.001 to 30 wt.-% of rare earth oxides on an oxide basis, said base glass comprising 1 wt.-% of water at the most and 1 wt.-% of B_2O_3 at the most. Preferably, the glass does not contain any water at all (0.1 wt-% or 0.01 wt.-% at the most). Also preferably, the glass does not contain any B_2O_3 (0.1 wt-% or 0.01 wt.-% at the most). In some embodiments, the glass, apart from any unintended contaminants, is free of nitrides.

Please replace Paragraph [0024] with the following paragraph rewritten in amendment format:

[0024] Principally, all glasses based on the classical glass formers SiO_2, B_2O_3, and P_2O_5 or GeO_2 are suitable. A wide variety of these glasses is known for technical and optical applications. These glasses include alkaline-earth silicate glasses, lead-silicate glasses (flint glasses), soda-lime glasses (crown glasses), alkali-alkaline-earth silicate glasses, lanthanum oxide borate glasses, barium oxide silicate glasses, chalcogenide glasses and ~~halaid~~ halide glasses.

Please replace Paragraph [0035] with the following paragraph rewritten in amendment format:

[0035] According to a further development of the invention, the luminescent glass is an at least partially segregated glass comprising at least a certain fraction of the rear earth ions within the segregated regions. In some embodiments of rare earth oxide-containing glasses, at least 30% or at least 50% of the rare earth oxides present in the glass are contained within the segregated glass regions.

Please replace Paragraph [0036] with the following paragraph rewritten in amendment format:

[0036] According to a further embodiment of the invention, the rear earth ions may at least partially be included in crystallite inclusions of the glass. In some embodiments of rare earth oxide-containing glasses, at least 30% or at least 50% of the rare earth oxides present in the glass are contained within the crystalline glass regions.

Please replace Paragraph [0047] with the following paragraph rewritten in amendment format:

[0047] Phosphor glasses of the present invention comprise P_2O_5, Al_2O_3, alkali earth oxides, and alkaline earth oxides. Preferably, the glass contains a maximum of 4 weight percent, especially a maximum of 2 weight percent, of conventional additives or impurities, such as refining agents (e.g., As_2O_3, Sb_2O_3), antisolarants (e.g., TiO_2, Sb_2O_3, Nb_2O_5) and SiO_2 and ZrO_2 which can enter the glass through dissolution of the melting vessel. The inventive glasses are doped with trivalent lanthanide oxides (oxides of elements 57-71) or trivalent rare earth oxides

(lanthanide oxides and oxides of Sc and Y) in an amount exceeding 2 mol %, preferably exceeding 3 mol % and particularly preferably exceeding 4 mol%. Exemplary trivalent lanthanide/rare earth oxides are Y_2O_3, Sc_2O_3, La_2O_3, Ce_2O_3, Pr_2O_3, Nd_2O_3, Sm_2O_3, Eu_2O_3, Gd_2O_3, Tb_2O_3, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, and Yb_2O_3. In some embodiments, the glass comprises more than 2 mol-%, more than 3 mol-%, or more than 4 mol-% RE_2O_3, where RE_2O_3 refers to more than one trivalent rare earth oxide selected from the group formed by La_2O_3, Ce_2O_3, Pr_2O_3, Nd_2O_3, Sm_2O_3, Eu_2O_3, Gd_2O_3, Tb_2O_3, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, and Yb_2O_3. The phosphor glasses according to the invention are highly doped with preferably trivalent terbium, europium, and cerium and/or thulium. In these glasses, the oxygen in the metal oxides can optionally be replaced by fluorine up to 90%, or other halogens and anions such as nitrogen and carbon up to 10%. In some embodiments of the glasses, up to 10% of the oxygen contained within the glass is replaced by at least one anion different from oxygen; in some embodiments, up to 10% of the oxygen contained within the glass is replaced by at least one anion selected from the group formed by nitrogen, carbon and halides.

Please replace Paragraph [0048] with the following paragraph rewritten in amendment format:

[0048] In general, the glasses have a P_2O_5 content of at least 50 mol %, or 50 to 75 mol %, for example, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74 mol %. Further preference is given to glasses having a P_2O_5 content above 60 mol %, more preferably above 65 mol %, even more preferably above 70 mol %. It is believed that higher levels of P_2O_5 enhance the solubility for rare earth ions and reduce harmful quenching of the rare earth excited states involved in the transitions generating fluorescence.

Please replace Paragraph [0049] with the following paragraph rewritten in amendment format:

[0049] In addition, in general, the glasses have a Al_2O_3 content of at least 3 mol %, or 3 to 15 mol %, for example, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 mol %. Preference is given to glasses having an Al_2O_3 content above 5 mol %, more preferably above 8 mol %, and even more preferably over 10 mol % since these glasses are characterized by improved chemical durability.